

## CHAPTER 11

# Non-Radioactive Waste

### 11.1 Introduction

This chapter provides the volume and location of non-radioactive hazardous waste and non-radioactive sanitary waste generated from non-routine and routine operations and cleanup/stabilization activities at DOE sites. The data included in this chapter reflect the volumes of non-radioactive waste generated in fiscal years (FY) 1998 and 1999.

The DOE Pollution Prevention Program tracks the generation of non-radioactive hazardous and non-radioactive sanitary waste, as well as the progress made towards reducing, and where possible, eliminating the generation and release of DOE non-radioactive waste. Data on these waste types are housed in the Pollution Prevention Database, which is the primary source of information for the *DOE Annual Report of Waste Generation and Pollution Prevention Progress* (also called the *Waste Generation Report*) and is the only source of data used for this chapter.<sup>1</sup>

**Table 11-1**  
**Summary of Total Non-Radioactive Waste Volume**  
**Newly-Generated as Reported by Sites:**  
**FY 1998 and FY 1999 Actuals**

In cubic meters

Waste Type	FY 1998 Total	FY 1999 Total
Non-Routine RCRA Waste	7,449	4,368
Non-Routine State Waste	4,219	9,964
Non-Routine TSCA Waste	1,597	7,803
Routine RCRA Waste	1,149	558
Routine State Waste	813	454
Routine TSCA Waste	105	79
Non-Routine Sanitary Waste	36,200	69,233
Routine Sanitary Waste	40,414	47,524

#### 11.1.1 Non-Radioactive Waste Definition and Explanation

The following definitions explain the terms used in Tables 11-1 through 11-3.

**Non-routine waste** is characterized as waste that has resulted from one-time operations by Environmental Restoration program activities, including primary and secondary waste associated with retrieval and remediation operations, "legacy waste," and waste from contamination and decommissioning/transition operations.

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<sup>1</sup> For more information on the Pollution Prevention Program and *Waste Generation Report*, visit DOE's Office of Pollution Prevention web site at <http://www.em.doe.gov/wastemin> or EM-22 Pollution Prevention Team Website at <http://twilight.saic.com/wastemin>.

**Routine waste** is a result of any type of production, analytical, and/or research and development laboratory operations; treatment, storage, or disposal operations; “work-for-others;” or any other periodic and recurring work that is considered ongoing.

**Non-radioactive hazardous waste** is defined as: any solid waste or combination of solid waste that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: (1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

In this chapter, non-radioactive hazardous waste includes: (1) Resource Conservation and Recovery Act (RCRA) waste, (2) State-regulated waste, and (3) Toxic Substances Control Act (TSCA) waste.

- **RCRA waste** is solid waste regulated under RCRA as either a listed hazardous waste (per 40 CFR 261.30 – 261.33) or a characteristic hazardous waste.
- **State waste** is any waste not specifically regulated under RCRA, which may be regulated by state or local authorities (such as used oil).
- **TSCA waste** is individual chemical waste (both liquid and solid) regulated by the Toxic Substances Control Act (TSCA).

**Non-radioactive sanitary waste** is defined as waste that does not contain radioactive or hazardous constituents sufficient to require special management. Non-radioactive sanitary waste typically enters sites as procured items, mail, or food, or as other substances such as glass, brush, and construction debris. Sites use these items and then either recycle, reuse, salvage, or dispose of them in a landfill or other appropriate disposal facility. Disposed materials usually include items such as construction waste, food and food-contaminated waste, paper products, glass, and styrofoam.

### 11.1.2 Organization of Non-Radioactive Waste Data

The following FY 1998 and FY 1999 data sections provide information about non-radioactive hazardous and non-radioactive sanitary waste. The non-radioactive hazardous waste types are Non-Routine RCRA Waste, Non-Routine State Waste, Non-Routine TSCA Waste, Routine RCRA Waste, Routine State Waste, and Routine TSCA Waste. The non-radioactive sanitary waste types are Non-Routine Sanitary Waste and Routine Sanitary Waste.

## 11.2 Non-Radioactive Hazardous Waste as Reported by Sites

Table 11-2 provides the reported volumes of non-radioactive hazardous waste newly-generated in fiscal years 1998 and 1999.

### About the Data in This Chapter

- The FY 2000 DOE Environmental Management (EM) Corporate Database provided the data for this chapter. The data in the EM Corporate Database are available through the Central Internet Database (CID), located at <http://cid.em.doe.gov>. (Please see Chapter 1 for more information on both the EM Corporate Database and the CID.)
- The non-radioactive waste documented in this chapter was generated during FY 1998 and FY 1999. Generation totals do not include waste produced in previous years that is being re-packaged, treated, or disposed in the reporting year; but do include secondary waste generated by the treatment, storage, or disposal of previously-generated waste.
- The non-radioactive waste quantity data in this report are rounded to the nearest whole number except for volumes less than one, in which case they are rounded to one significant digit.

Table 11-2

## Total Volume of Non-Radioactive Hazardous Waste Newly-Generated as Reported by Sites: FY 1998 and FY 1999 Actuals

In cubic meters

State	Site	Site Code	Non-Routine RCRA Waste		Non-Routine State Waste		Non-Routine TSCA Waste		Routine RCRA Waste		Routine State Waste		Routine TSCA Waste		Site Total	
			FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999
CA	Energy Technology Engineering Center	ETEC	1	2	3	2	3	31	1	-	5	-	-	-	13	35
	Lawrence Berkeley National Laboratory	LABL	20	3	20	4	21	1	21	13	21	29	-	-	104	49
	Lawrence Livermore National Laboratory	LLMS	161	59	91	71	68	349	131	85	122	84	0.1	0.02	573	647
	Sandia National Laboratories - CA	SNLC	4	2	35	9	14	37	18	17	6	9	-	-	75	73
	Stanford Linear Accelerator Center	SLAC	419	2	31	2,129	612	1,343	27	14	34	38	-	-	1,124	3,527
CO	Grand Junction Office	GJPO	-	-	-	-	-	-	0.2	0.2	1	-	0.3	-	2	0.2
	Rocky Flats Environmental Technology Site	RFTS	18	8	-	-	9	2	-	-	-	-	-	-	28	10
	Western Area Power Administration	n/a	0.01	1	-	-	-	-	4	2	2	4	97	43	104	49
IA	Ames Laboratory	AMES	-	-	-	-	-	-	9	3	-	-	-	2	9	5
ID	Argonne National Laboratory - West	ANLW	-	-	-	-	-	17	3	2	-	-	0.3	0.3	3	19
	Idaho National Engineering and Environmental Laboratory	INEEL	15	40	-	-	5	22	21	30	-	-	-	-	41	92
IL	Argonne National Laboratory - East	ANLE	0.4	1	115	660	143	119	54	28	239	19	-	-	552	826
	Fermi National Accelerator Laboratory	FNAL	1	1	899	3	8	138	6	5	36	32	0.01	1	950	180
KY	Paducah Gaseous Diffusion Plant	PGDP	-	10	-	-	-	-	-	-	-	-	-	-	0	10
LA	Strategic Petroleum Reserve Project Management Office	SPRO	-	-	-	-	-	-	3	4	-	-	-	-	3	4
MO	Kansas City Plant	KSCP	1,986	81	-	-	44	358	100	65	0.1	1	-	-	2,130	505
	Weldon Spring Site	WSSP	1	-	-	-	-	-	-	-	-	-	-	-	1	0
NJ	Princeton Plasma Physics Laboratory	PPPL	-	-	21	-	127	19	8	2	4	1	-	-	160	23
NM	Los Alamos National Laboratory	LANL	905	3,951	403	6,814	198	4,578	162	10	107	23	-	-	1,776	15,376
	Lovelace Respiratory Research Institute	LRRRI	-	-	-	-	-	-	3	-	-	-	-	-	3	0
	Sandia National Laboratories - NM	SNLN	12	33	19	2	37	159	29	39	45	65	0.1	0.3	142	298
	Waste Isolation Pilot Plant	WIPP	-	-	-	-	-	-	80	30	0.02	0.1	-	-	80	30

Notes:

- Hyphens indicate volumes of zero.
- Due to data rounding, the totals in this table may not equal the exact sums of the site-specific data.

(continued...)

**Table 11-2 (cont'd)**  
**Total Volume of Non-Radioactive Hazardous Waste Newly-Generated as Reported by Sites: FY 1998 and FY 1999 Actuals**

In cubic meters

			Non-Routine RCRA Waste		Non-Routine State Waste		Non-Routine TSCA Waste		Routine RCRA Waste		Routine State Waste		Routine TSCA Waste		Site Total	
State	Site	Site Code	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999
NV	Nevada Test Site	NVTS	17	13	0.4	-	-	-	50	14	0.02	-	-	3	68	30
	Yucca Mountain Site Characterization Project	YMP	-	-	-	-	-	-	1	1	-	-	-	-	1	1
NY	Brookhaven National Laboratory	BRNL	11	6	2,456	245	21	515	51	19	75	44	2	2	2,615	830
	West Valley Demonstration Project	WVDP	-	-	-	-	-	-	28	6	-	-	-	-	28	6
	Environmental Measurements Laboratory	n/a	1	-	-	-	-	-	-	-	-	0.1	-	-	1	0.1
OH	Ashtabula Environmental Management Project	AEMP	-	8	-	-	-	-	-	-	-	-	-	-	0	8
	Fernald Environmental Management Project	FEMP	22	1	-	-	-	-	0.1	0.4	-	-	-	-	22	1
	Miamisburg Environmental Management Project (Mound)	MEMP	25	18	2	-	30	32	4	2	0.4	-	-	-	62	52
	Portsmouth Gaseous Diffusion Plant	PORT	8	2	-	-	10	4	-	-	-	-	-	-	18	6
OK	Southwestern Power Administration	n/a	-	-	-	-	15	31	10	0.2	-	18	3	-	29	49
OR	Albany Research Center	AMRC	-	5	-	2	-	-	-	0.3	-	-	-	0.3	0	7
SC	Savannah River Site	SARS	1,596	1	-	-	41	23	177	27	-	-	-	-	1,815	51
TN	Oak Ridge Associated Universities	ORAU	-	-	-	-	-	-	1	0.5	-	-	0.1	1	1	1
	Oak Ridge Reservation	ORTN	1,271	7	-	-	45	13	46	28	-	-	-	-	1,362	48
	Office of Scientific and Technical Information	n/a	-	-	-	-	-	-	2	0.1	-	-	-	-	2	0.1
TX	Pantex Plant	PAPL	919	2	46	10	11	1	50	38	103	82	-	-	1,130	133
VA	Thomas Jefferson National Accelerator Facility	n/a	-	-	-	-	-	-	3	5	-	-	1	-	4	5
WA	Hanford Site	HASI	27	95	73	13	10	11	8	5	4	1	-	-	121	124
	Pacific Northwest National Laboratory	PNNL	9	2	4	-	1	-	30	31	10	5	-	3	54	41
WV	National Energy Technology Laboratory	n/a	-	-	-	-	122	-	6	2	0.2	0.2	0.2	3	128	5
<b>Total</b>			<b>7,449</b>	<b>4,368</b>	<b>4,219</b>	<b>9,964</b>	<b>1,597</b>	<b>7,803</b>	<b>1,149</b>	<b>558</b>	<b>813</b>	<b>454</b>	<b>105</b>	<b>79</b>	<b>15,332</b>	<b>23,226</b>

Notes:

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## 11.3 Non-Radioactive Sanitary Waste as Reported by Sites

Table 11-3 provides the reported volumes of non-radioactive sanitary waste newly-generated in fiscal year 1998 and fiscal year 1999.

**Table 11-3**  
**Total Volume of Non-Radioactive Sanitary Waste Newly-Generated as Reported by Sites:**  
**FY 1998 and FY 1999 Actuals**

In cubic meters

State	Site	Site Code	Non-Routine Sanitary Waste		Routine Sanitary Waste		Site Total	
			FY 1998	FY 1999	FY 1998	FY 1999	FY 1998	FY 1999
CA	Energy Technology Engineering Center	ETEC	-	-	69	66	69	66
	Lawrence Berkeley National Laboratory	LABL	1,249	-	276	643	1,525	643
	Lawrence Livermore National Laboratory	LLNL	2,446	3,053	2,106	1,805	4,552	4,859
	Sandia National Laboratories - CA	SNLC	144	142	196	182	340	324
	Stanford Linear Accelerator Center	SLAC	-	-	576	496	576	496
CO	Grand Junction Office	GJPO	-	-	3,578	327	3,578	327
	Rocky Flats Environmental Technology Site	RFTS	2,434	2,441	531	556	2,965	2,996
	Western Area Power Administration	n/a	18	352	1,357	1,363	1,375	1,715
ID	Argonne National Laboratory - West	ANLW	-	-	885	787	885	787
	Idaho National Engineering and Environmental Laboratory	INEEL	4,271	24,200	1,957	1,117	6,228	25,317
IL	Argonne National Laboratory - East	ANLE	1,045	1,561	804	539	1,850	2,100
	Fermi National Accelerator Laboratory	FNAL	-	-	357	386	357	386
KY	Paducah Gaseous Diffusion Plant	PDGP	3,969	4,507	5	-	3,974	4,507
LA	Strategic Petroleum Reserve Management Project	SPRO	-	-	424	362	424	362
MO	Kansas City Plant	KSCP	4,909	-	-	1,759	4,909	1,759
	Weldon Spring Site	WSSP	1,684	-	-	-	1,684	0
NJ	Princeton Plasma Physics Laboratory	PPPL	-	-	89	82	89	82
NM	Los Alamos National Laboratory	LANL	-	7,581	2,088	2,538	2,088	10,119
	Sandia National Laboratories - NM	SNLN	5,529	10,130	3,707	3,434	9,236	13,564
	Waste Isolation Pilot Plant	WIPP	-	-	821	751	821	751
NV	Nevada Test Site	NVTS	1,647	5,157	6,461	7,457	8,108	12,614
	Yucca Mountain Site Characterization Project	YMP	-	-	-	681	0	681
	Brookhaven National Laboratory	BRNL	-	-	743	631	743	631
NY	West Valley Demonstration Project	WVDP	-	197	343	290	343	487
OH	Ashtabula Environmental Management Project	AEMP	-	38	-	-	0	38
	Fernald Environmental Management Project	FEMP	95	351	183	7,410	278	7,761
	Miamisburg Environmental Management Project (Mound)	MEMP	2,100	4,193	317	315	2,417	4,508
OK	Southwestern Power Administration	n/a	15	-	0.5	25	16	25
OR	Albany Research Center	AMRC	-	-	-	222	0	222
SC	Savannah River Site	SARS	2,250	3,483	2,641	1,760	4,891	5,243
TN	Oak Ridge Associated Universities	ORAU	-	-	1	1	1	1
	Oak Ridge Reservation	ORTN	1,938	1,456	8,007	9,473	9,945	10,930
TX	Pantex Plant	PAPL	-	-	657	619	657	619
VA	Thomas Jefferson National Accelerator Facility	n/a	-	-	225	218	225	218
WA	Hanford Site	HASI	457	391	813	761	1,270	1,151
	Pacific Northwest National Laboratory	PNNL	-	-	75	131	75	131
WV	National Energy Technology Laboratory	n/a	-	-	122	338	122	338
<b>Total</b>			<b>36,200</b>	<b>69,233</b>	<b>40,414</b>	<b>47,524</b>	<b>76,614</b>	<b>116,758</b>

Notes:

- Hyphens indicate volumes of zero.
- Due to data rounding, the totals in this table may not equal the exact sums of the site-specific data.